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ABSTRACT

The experimental Vocational Exploration in the Private Sector (VEPS-I) program, 1971-72 was intended to provide dropout-prone Neighborhood Youth Corps (NYC) youth with intensive counseling, supportive services and work experience in the private sector, to encourage completion of high school, and to assist in obtaining full-time employment upon graduation. This report is a longitudinal impact study of enrollees from their selection in June, 1971, to a point after high school graduation in June, 1973. The analysis indicates that VEPS achieved significant success in attaining its objectives. Outcome data for the VEPS-I completers was compared to similar data for a control group of NYC youth. T-score tests on change in grade point average and school attendance over the 1970-71 to 1972-73 school years reveal statistically significant improvement. No difference could be observed in comparing graduation/dropout rates for the two groups, although the VEPS-I group could have been expected to have a higher school dropout rate. VEPS-I youth achieved a statistically significant higher employment rate upon graduation compared to the control group. (Author)

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Longitudinal Impact Assessment of the 1971-72 Vocational Exploration in the Private Sector Program

Center for Urban Programs
Saint Louis University

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TM006 445

LONGITUDINAL IMPACT ASSESSMENT OF THE 1971-72 VOCATIONAL EXPLORATION IN THE PRIVATE SECTOR PROGRAM

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16. Abstracts

The experimental VEPS-I program (1971-72) was intended to provide dropout prone NYC youth with intensive counseling, supportive services and work experience in the private sector, to encourage completion of high school and to assist in obtaining full-time employment upon graduation. The report is a longitudinal impact study of enrollees from their selection in June, 1971, to a point after high school graduation in June, 1973. The analysis indicates that VEPS achieved significant success in attaining its objectives. Outcome data for the VEPS-I completers was compared to similar data for a control group of NYC youth. T-score tests on change in grade point average and school attendance over the 1970-71 to 1972-73 school years reveal statistically significant improvement (.001 level). No difference could be observed in comparing graduation/dropout rates for the two groups, although the VEPS-I group could have been expected to have a higher school dropout rate. VEPS-I youth enjoyed a statistically significant (.001 level) higher employment rate upon graduation compared to the control group.

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PREFACE

In a series of assessment papers, progress reports and final reports prepared for the U.S. Department of Labor, the Center for Urban Programs at Saint Louis University has attempted to document the origins, development, organization, administration and impact of the experimental summer/in-school Vocational Exploration in the Private Sector (VEPS) program for dropout prone NYC youth. Specifically, the Center for Urban Programs was under contract and grant obligation to monitor and assess the VEPS program with a view toward development of an implementation manual, assessment of programmatic impacts on an annual basis, and assessment of the longitudinal impact of the first year of VEPS using a control group selected from several VEPS cities. Over the course of the Saint Louis University's involvement with the VEPS program two implementation manuals were produced: Vocational Exploration in the Private Sector: Model for Implementing the 1972-73 Guidelines (May, 1972), and Youth Training in the Private Sector: A Model for Implementation (June, 1974). A final report on the VEPS-I program (1971-72) was published in February, 1973, titled Vocational Exploration in the Private Sector: Final Report and Assessment, 1971-72; a final report covering VEPS-II (1972-73) was prepared in July, 1974, entitled Vocational Exploration in the Private Sector: Final Report and Assessment, 1972-73; Comparison of Impact of the Pilot and Second Experimental Years.

In addition to these formal reports, a national conference of VEPS program staff and Department of Labor representatives was held in St. Louis under the auspices of the Center for Urban Programs, November 1-3, 1972. The proceedings of this conference were published in December of 1972. Mid-year program assessments were prepared for the Department of Labor on January 27, 1972, and May 10, 1973, which provided the basis for programmatic decision-making on the continuation and expansion of the VEPS program. Periodic interim progress reports were also provided to the Department of Labor throughout the two year history of the VEPS experiment. This report is the last of the series. It attempts to reach a definitive assessment of the VEPS impact.

We are grateful for the support and cooperation of numerous individuals across the nation in the collection of information and in the production of these documents. The VEPS program staffs in the individual cities proved willing to endure the frequent field visits of the Center for Urban Programs' monitoring teams. Their suggestions and cooperation were invaluable in the development of the program model and the assessment of programmatic outcomes. The support and assistance of people in the U.S. Office of Education, the national office of the National Alliance of Businessmen, and the various metro offices of NAB also deserve mention. School officials in the various districts operating VEPS programs were also supportive of our efforts.

Although federal officials in the regional offices of the Department of Labor devoted much time and effort to the VEPS program and its assessment, special thanks are due to personnel in Washington, D.C., especially Mr. Joseph Seiler, formerly Chief, Division of Experimental Operations Research, Office of Research and Development, Manpower Administration, whose

early encouragement of the VEPS concept and support of the monitoring and assessment was extremely helpful. Mr. Thomas Bruening proved an able and supportive successor to Mr. Seiler. Ms. Louise Scott, also of the Division of Experimental Operations Research and our project officer, deserves special thanks for her encouragement, assistance and advice. Ms. Wendy Leake, Division of Work Experience, Manpower Administration, provided yeoman service to the VEPS program and the monitoring team.

Finally, we wish to acknowledge and thank our colleagues at the Center for Urban Programs, Saint Louis University, for their support over the long duration of this project. Our secretarial staff produced reams of documentation with little complaint, and the Yalem Computer Center proved capable of withstanding the petty grievances of the analysts. Each of us holds the other responsible for errors of judgment or analysis.

Saint Louis, Missouri
July, 1974

Donald P. Sprengel
E. Allan Tomey

TABLE OF CONTENTS

PREFACE i

LIST OF TABLES v

PART I. INTRODUCTION TO VEPS 1

A. Description of the First Year VEPS Program (VEPS-I) ... 1
B. Program Objectives of VEPS 3
C. The Role of the Center for Urban Programs 4

PART II. RESEARCH METHODOLOGY 7

A. Experimental Research Design 7
B. Selection of the Control Group 8
C. Experimental and Control Group Comparability 10
D. Data Processing and Statistical Routines 14

PART III. ASSESSMENT OF LONGITUDINAL IMPACT ON VEPS-I COMPLETERS 15

A. Academic Performance of the VEPS-I Completers 15
B. Final Academic Disposition 19
C. Employment Patterns Following the VEPS Experience 20
D. Final Employment Disposition 21

PART IV. COMPARISON OF VEPS COMPLETER AND CONTROL GROUP OUTCOMES ... 23

A. Comparison of Academic Performance and Attendance Patterns 23
B. Final Academic Disposition 31
C. Employability in the Full-Time Work Force 33

PART V. SUMMARY AND CONCLUSIONS 37

APPENDIX 41

TABLE A-1. COMPARISON OF VEPS PROGRAMMATIC OUTCOMES FOR VEPS-I AND VEPS-II COMPLETERS 41

LIST OF TABLES

Table		Page
1	Selected Demographic Characteristics of VEPS-I Completers and Control Group	11
2	Selected Family Characteristics of VEPS-I Completers and Control Group	12
3	Selected Employment History Characteristics of VEPS-I Completers and Control Group	13
4	T-Scores and Significance Levels of Academic Indicator Comparability Between VEPS Completers and Control Group	13
5	Comparison of Change in Academic Indicators for the VEPS-I and Senior Years for VEPS-I Completers	16
6	Academic Indicator Trends: VEPS to Senior Year	17
7	Composite Three Year Academic Indicator Trends	18
8	Final Academic Disposition for VEPS-I Completers as of June, 1973	19
9	Employment Status of VEPS-I Completers at Selected Time References	20
10	Employment Status of VEPS Completers Following Graduation	21
11	Within City T-Score Comparisons of VEPS and Control Groups for Academic Indicators By Year and By Change Over Time	25
12	Comparison of Change in Academic Indicators for the VEPS-I and Senior Years for VEPS-I Completers and Control Group	27
13	Composite Three Year Academic Indicator Trends	29
14	T-Score Comparisons of VEPS and Control Group Aggregates for Academic Indicators By Year and By Change Over Time	30
15	Final Academic Disposition for VEPS-I Completers and the Control Group as of June, 1973	32
16	Final Employment Disposition for VEPS-I Completers and the Control Group as of June, 1973	35

PART I

INTRODUCTION TO VEPS

As outlined in U.S. Department of Labor Field Memorandum No. 92-71 (March 19, 1971) and detailed in Field Memorandum No. 183-71 (May 14, 1971) the U.S. Department of Labor, the National Alliance of Businessmen (NAB), and the Office of Education of HEW cooperated in the development and demonstration of a full year pilot program "Vocational Exploration in the Private Sector" (VEPS) for Neighborhood Youth Corps in-school youth. The time frame of the experimental program was June 1, 1971 to June 30, 1972.

A. Description of the First Year VEPS Program (VEPS-I)

As described in Field Memorandum No. 183-71, the year-long VEPS-I program was designed for eleventh grade, 16 year old Neighborhood Youth Corps, in-school youth who could be identified as probable dropouts. Originally, fourteen cities were targeted for VEPS-I, but four sites were unable to initiate programs. Two cities -- Columbus, Georgia and Portland, Oregon -- terminated VEPS-I after the summer phase. The cities that completed the program were: Columbus, Ohio; Flint, Michigan; Fort Worth, Texas; Lawrence and Haverhill, Massachusetts; Norfolk, Virginia; Pittsburgh, Pennsylvania; Salt Lake City, Utah; and San Bernardino, California. Developed by the U.S. Department of Labor and the National Alliance of Businessmen (NAB), joined by the U.S. Office of Education of HEW, the program provided career exploration and training opportunities that, hopefully, would result in reduction of high school dropouts and the flow of untrained, unskilled youth into the labor market. Primary emphasis was to be given to the development of training and career exploration opportunities in order to provide enrollees with the widest possible exposure to the world of work. Training assignments were to be related directly to the interests and capabilities of enrollees in concert with their educational goals.

The major components of VEPS were as follows:

(1) Counseling and Remediation. This component was to provide enrollees with the motivation and basic educational skills needed to function effectively in a work environment. Remedial needs were to be determined and assistance rendered accordingly. Counseling assistance was to be provided at work, in school, and at home.

(2) Orientation. This component was to provide enrollees with a basic grasp of the demands placed on the individual in the world of work, work attitudes and habits, an awareness of the participating company's activities and company facilities, and an explication of the enrollees' primary objectives while in the program and the company's interest in the program.

(3) Career Exploration. This component was to provide the opportunity for enrollees to broaden their perspective of the panorama of jobs in the world of work, to observe others in a work environment, to discuss with permanent employees the training and education needed for job success, to understand the rewards arising from employment, and to learn of the possibilities of upward mobility in a given skill.

(4) Non-Productive On-The-Job Training. This component involved close supervision of youth enrollees as they developed work habits and basic job skills and the application of those learned skills in the actual work environment. This component was entirely non-productive on-the-job training at private sector worksites.

(5) Productive Work Experience. This program component provided actual work experience in production of marketable goods and services with wages paid entirely by the employer. (See details below concerning "Employer Phase.")

The first four components listed above represented program activities conducted when wages were paid to enrollees from NYC sponsor funds--referred to hereafter as "NYC Phase." The fifth component constituted the "Employer Phase" with wages paid entirely by the private sector. The full year VEPS program had three segments (summer, first school semester, and second school semester), each of which had an "NYC Phase" and an "Employer Phase" during the weeks designated below.

Segment	NYC Phase	Employer Phase
Summer		
12 weeks (39 hours per week)	Weeks 1-6	Weeks 7-12
First School Semester		
19 weeks (15 hours per week)	Weeks 1-15	Weeks 16-19
Second School Semester		
19 weeks (15 hours per week)	Weeks 1-10	Weeks 11-19

At the start of each segment, the enrollee was to move to a new work station either at his present employer or with another employer. At the conclusion of the program each enrollee was to have had three separate VEPS work experiences.

Youth participants in the VEPS program were to be recruited by NYC sponsors; potential enrollees were to be in-school youth at least 16 years of age who were economically disadvantaged as defined by NYC guidelines. Candidates were to be referred to special high school counselors for certification that the students would be 11th graders in September, 1971, and that they were "probable dropouts."

The special high school counselors assigned to the program were funded by the U.S. Office of Education. Counselors were to be selected for their interest in aiding the disadvantaged rather than objective counseling credentials, except where State regulations or union agreements required fully credentialed counselors. They were to devote full time to the enrollee's remediation, counseling, and career exploration needs and interests. A counselor-enrollee ratio of 1:20 was to be maintained wherever possible. Counselors would contact and observe enrollees at their private sector worksites and at school, and would assist NYC sponsors and companies in developing and operating several program components.

Work sites for enrollees were to be identified and selected by NAB metro offices; criteria for participating private sector companies included a demonstrated interest in training and employing in-school youth, and a capability

for training youth personnel. The program was to be designed so as to provide each enrollee three separate and distinct work experiences either within the same company or in different companies over the course of one year. As conditions for participation in the program, a company was to agree to the following:

(1) Provide, at its own cost, necessary staff, space, equipment, supplies and access to the principal worksites;

(2) Make these resources available to enrollees and high school counselors; and

(3) Absorb the salaries of enrollees when each "NYC Phase" terminated.

Additional responsibilities of private sector participants under terms of the program included: (a) identification of training and employment positions; (b) development of orientation and career exploration curricula with local NYC and school officials; (c) allocation of supervisory personnel to training and work with enrollees; (d) development of procedures governing payrolls during training periods where the employer bears the full cost of the enrollee's salary; and (e) designation of a company coordinator to assist the NYC sponsor and high school counselor in developing program curriculums and schedules.

In addition to the recruitment and referral of youth functions, NYC sponsors were responsible for program administration including record keeping, paying NYC wages to enrollees, maintaining liaison with company coordinators and high school counselors, working with the metro NAB youth director to provide for joint monitoring, and establishing a program review committee.

B. Program Objectives of VEPS

The program objectives of VEPS were comparable to those of the regular NYC in-school program. Briefly stated, these objectives were:

(1) To provide youth with the incentive to remain in school and earn a high school diploma -- The VEPS project was designed for probable high school dropouts. The incentive to remain in school was to be provided by intensive counseling, remediation, and work experience components that would demonstrate the need for and value of education.

(2) To facilitate the smooth transition upon high school graduation into the full-time work force -- Utilizing private sector work sites with three separate work experiences, coupled with career exploration, the VEPS program sought to provide a broader and more transferable NYC work experience by using private rather than public sector work sites.

(3) To provide youth with part-time employment while in school -- A major objective of VEPS-I was for employers to continue employing enrollees on a full-time basis during the summer following the initial program year and on a part-time basis during the enrollees' high school senior year. Upon graduation, it was hoped that the enrollees would be employed by the participating company as a regular full-time employee or by another employer seeking labor skills possessed by the enrollees.

(4) To dramatize the need for and utility of a sound high school education for success in the world of work -- Through example, experience and counseling it was hoped that enrollees could draw linkages between the opportunities provided through formal education with the requirements for employability in the private sector.

C. The Role of the Center for Urban Programs, Saint Louis University

The Center for Urban Programs (CUP) at Saint Louis University was under contract (Number 82-29-71-34) to the U.S. Department of Labor to monitor-analyze the experimental Vocational Exploration in the Private Sector (VEPS) program. Under terms of the contract CUP had the following general responsibilities:

(1) Compare and document alternative approaches for establishing and operating the several program components;

(2) Provide periodic feedback to the Department of Labor regarding program operations and problems;

(3) Analyze the broad first year VEPS experience to: (a) assess whether there were outcomes which might support continuing VEPS in its second year; and (b) develop an improved VEPS design and guidelines for use in Summer 1972 and thereafter; and

(4) Assess the immediate impact of VEPS-I on the participating youth and agencies.

CUP monitored the VEPS-I program and collected enrollee impact data in eight of the nine participating cities. Periodic reports were submitted to the Division of Experimental Operations Research of the Department of Labor. An assessment report was prepared in January, 1972, which contained a preliminary estimate of impact on VEPS-I enrollees and recommended guidelines for a second program year. The experience during the first year of the VEPS program has been detailed by the Center for Urban Programs in Vocational Exploration in the Private Sector: Final Report and Assessment 1971-72. In addition, a program model containing guidelines and implementation suggestions for the second year of VEPS (VEPS-II) was distributed in Spring, 1972 (Vocational Exploration in the Private Sector: Model for Implementing the 1972-73 Guidelines) to assist those programs operating during the 1972-73 school year.

The duration of the first year study of the VEPS program was insufficient to determine whether long term VEPS-I program objectives had been met. The study ended with the completion of the program year. Thus, contract termination prevented analysis of specific questions relating to high school graduation and future labor market participation. Most of the VEPS-I enrollees were in their junior year during the program year and would not move into the full-time labor force until the summer of 1973. Ultimately, the disposition of students leaving high school was the fundamental question which had to be answered through further analysis.

Effective assessment of VEPS-I dictated the need for a longitudinal study to compare changes in enrollee academic performance, attendance, high school graduation/dropout rates, and absorption into the labor force. For example, the goal of moving enrollees into the labor force could only be

measured at a point in time two years after the VEPS-I program was initiated. Therefore, CUP needed to track VEPS-I enrollees through the program year, the summer following, the senior year, and into the summer following their anticipated graduation.

Other goals, such as improved academic performance, also had long term implications. Presumably, students whose grades were improving would be more interested in staying in school and, at the same time, be in a better position to complete the necessary credits for graduation. In short, longitudinal study was required to assess the extent to which VEPS-I goals were achieved over time.

The longitudinal tracking of only VEPS-I enrollees was incapable of assessing the significance of the program due to other possible intervening variables; use of a control group was also required. The objectives of VEPS-I constituted the variables to be considered. Operationalization of those variables provided the data sets for the analysis and assessment of outcomes. While it may be suggested that more complex indicators could be used, the goals of VEPS regarding the target group of NYC eligible, probable dropouts required simple outcome data.

The existence of records and other information on a group of regular NYC enrollees suggested the availability of a control group. Although this group was not selected in advance (because CUP's first grant was merely to monitor the first year program), the existence of NYC records made the selection relatively easy; in consultation with the Department of Labor four control group cities were chosen: Columbus, Flint, Pittsburgh, and San Bernardino. Although methodological purity would prefer control group selection at the commencement of the program and late selection did cause some comparability problems (See Part II of this report), the use of a pre-test, post-test with control group experimental design was nonetheless feasible.

Encouraged by the possibilities of the longitudinal study, the Center for Urban Programs drafted a proposal for the Department of Labor. As a result the Center received financial support under Grant Number 42-29-72-07. The Grant was made in order to enable the Center to pursue the questions raised concerning the longitudinal impact of the VEPS-I program. As noted above, these questions relate to the long term effects of the first year program, especially with respect to basic programmatic goals. At the time of the award it was assumed that the NYC Program would be in operation during the 1973-74 school year.

Under the terms of the grant the Center for Urban Programs was to perform the following tasks: (1) monitor the implementation of the VEPS-II program and prepare a revised implementation manual (See Youth Training in the Private Sector: A Model for Implementation, June, 1974); (2) compare the VEPS-I and VEPS-II experiences (See Vocational Exploration in the Private Sector: Final Report and Assessment, 1972-73; Comparison of Impact of the Pilot and Second Experimental Years, July, 1974); and (3) determine the extent to which the VEPS-I program attained its several objectives through longitudinal analysis and the utilization of a control group of regular NYC enrollees. This report, the last in the series of VEPS documentation, deals with this third task.

Part II of this report sets forth the research methodology employed in the longitudinal study and gives special attention to the selection of the control group as well as its comparability to the VEPS-I group. Part III of the report analyzes programmatic outcomes for the VEPS-I enrollees only, giving special attention to employability patterns at several cross-sections in time. Part IV assesses programmatic outcomes in comparison to the control group; statistical measures of significance are utilized to compare differences. Section V contains summary observations.

PART II

RESEARCH METHODOLOGY

The experience and knowledge gained from having monitored and assessed both the VEPS-I and VEPS-II programs permitted the Center for Urban Programs to adopt a relatively simple research design. Information posited as necessary to specify characteristics of enrollees and assess programmatic outcomes based on stated goals was collected as described below. Pertinent enrollee demographic, family history and employment data were obtained from NYC-16 intake forms and school records. Survey instruments or interviews were employed where such forms were missing or otherwise not available. Outcome data were derived from interviews with VEPS project directors and individual counselors. For each of the enrollees records were obtained on academic performance, employability and general behavior. Academic impact data were obtained through access to the school records of the individual. Complete confidentiality was assured and maintained throughout the data collection and analysis. Both employment and academic impact variables were correlated with an array of demographic, family history, and work experience variables in order to reveal commonalities among various categorizations of enrollees.

While the results of these analyses left the unmistakable impression that the VEPS experience had significant short and medium term impact upon the enrollees, the monitoring of both VEPS-I and VEPS-II did not permit answers to two vital questions:

(1) Although short term influence can be assessed, what is the long term influence of the VEPS experience upon the enrollee in terms of academic performance and transition into the full-time labor force?

(2) Are favorable outcomes among VEPS enrollees significantly different from those of regular summer and in-school NYC enrollees? Can any difference be attributed to the VEPS experience?

A. Experimental Research Design

To answer these questions, a standard pre-test, post-test with control group experimental design with multiple post-test observations was adopted. Graphically depicted, the research design may be presented as follows:

O_1 X O_2, O_3, O_4 Experimental (VEPS-I) Group

O_5 O_6 O_7 Control (Regular NYC) Group

in which the symbols have the following data and group designations:

O_1 represents academic performance in the 1970-71 academic year and then current information on demographic profiles and family history;

X represents the experimental VEPS year (1971-72);

O_2 represents academic performance in the 1971-72 academic year; employment status during the summer of 1972, and related data;

O_3 represents employment activity and academic status during the 1972-73 academic (senior) year;

O_4 represents final 1972-73 academic year performance, graduation/dropout rates, and employability status;

O_5 represents control group information comparable to O_1 for the experimental (VEPS-I) group;

O_6 represents comparable control group information to O_3;

O_7 represents comparable control group information to O_4.

The utilization of this design permits resolution of the questions raised above; it also provides longitudinal impact tracks for the VEPS-I enrollees concentrating on outcome variables and permits comparison to a control group of NYC enrollees along comparable dimensions. The design is an effective control for the intervention and influence of exogenous and intervening variables (assuming comparability between experimental and control groups), so that any significant differences in the academic performance or outcome variables may be attributed to the VEPS experience.

B. Selection of the Control Group

To implement the analysis design it was necessary to select a control group of approximately comparable size and characteristics to the VEPS-I experimental group. Since eight programs were intensively monitored during the VEPS-I program year and enrollee data for 1970-71 and 1971-72 were already collected, the selection of program sites in which to choose control groups became somewhat easier. Randomization among all enrollees in the eight programs would have required extensive travel and, given the problems cited below, would have been impossible in some cases. The design thus called for the selection of control groups in only four of the eight programs.

The criteria originally suggested to select the control group in each of the four cities were multiple and complex. The following itemization is based on the VEPS youth selection guidelines:

1. Control group youth had to be sixteen years of age and rising juniors in high school as of September 1, 1971;

2. They must have participated in the summer 1971 and in-school 1971-72 NYC program;

3. They should be identified as "probable dropouts;"

4. They must have been in school as of June, 1972; and

5. They must not have participated in all or any part of the VEPS programmatic experience.

Youth selection in VEPS-I mandated sixteen year old rising juniors who were probable dropouts; thus the control group should have had the same criteria for selection. However, as was noted in the VEPS-I final report,* adherence to these guidelines was not uniform among cities or consistent within cities. While a large majority of the VEPS enrollees met these criteria, large numbers did not. Consequently, when control groups were drawn, youth had to be included who did not meet all the formal program criteria in order to provide comparability between the two groups.

Related to this problem was an insufficiency in the size of the universe from which to select the control groups, especially in those cities where selection criteria were rigorously followed. Since the VEPS program had mandated certain demographic characteristics for enrollees, selection of VEPS youth from the pool of NYC enrollees reduced the size of the universe from which to select a control group. For example, if Flint, Michigan, enrolled sixty-two youth who met the age and academic year criteria for VEPS selection, the number of youth not selected who met the program (and thus control group) criteria would be substantially reduced.

The number of subjects available for the control group was further reduced by the requirement that the youth have been in both the summer and in-school NYC program during the VEPS experimental year; the sharply reduced size of in-school NYC programs thus acted to reduce the pool available for a control group. Finally, if VEPS personnel had carefully selected only those youth who, having met age and academic year criteria, were also probable dropouts, it would have been numerically and conceptually impossible to form a representative control group. Presumably, a number of youth who were not "probable dropouts" would have to be selected for the control group, thereby inhibiting direct outcome comparisons.

In summary, the pool of eligible control group youth available to the research team was considerably reduced by the fact that (1) the VEPS program had consumed a substantial proportion of the youth who met the selection criteria, (2) the youth had to remain in school during the VEPS year, and (3) the youth had to participate in both summer and in-school NYC programs.

Original procedures in selecting the control group were modified in light of the above problems. Initially, a case by case search of the 1971-72 NYC records was made, and a list of youth who met the selection criteria was compiled. If the resulting list was more than five percent below the required sample size, then a second list of youth was compiled using the same criteria with the exception of in-school NYC participation. If this modification also failed to attain the requisite number of youth, then cases were selected who were not rising juniors. Selection of these latter cases is justified by the fact that VEPS programs also included

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*Center for Urban Programs, Vocational Exploration in the Private Sector: Final Report and Assessment, 1971-72.

youth other than rising juniors. All youth who met the original selection criteria were included in the sample, and a systematic random sample of the other list(s) was used to draw a number sufficient to equal the desired size. Similar procedures were followed in cities which had not rigorously applied selection guidelines.

Where the initial listing was within five percent of the desired quota, then the entire group was absorbed. Finally, where the initial list was greater than five percent over the desired number, a systematic random sample was then drawn.

The choice of cities from which to select control groups was made on the basis of the following criteria: (1) potential existence of a large enough pool of in-school NYC enrollees so that a sample could be drawn; (2) ready access to school records and NYC counselors; (3) reasonable assurance of the cooperation of the VEPS staff and the school system, especially during follow-up; and (4) subjective judgments based on individual VEPS program designs. The four programs selected for control groups are: Columbus, Ohio; Flint, Michigan; Pittsburgh, Pennsylvania; and San Bernardino, California.

C. Experimental and Control Group Comparability

The sampling procedures for drawing the control group yielded 151 cases that, in aggregate, are reasonably comparable to the VEPS experimental group. In order to obtain a control group of adequate size, it ultimately proved necessary to deviate from the original, ideal design and to oversample in some cities to offset undersampling in others. Consequently, when the VEPS and control groups are compared, variations can be found.

A number of non-parametic statistical tests were used to determine whether differences between the VEPS and control groups were within tolerable limits, given the sampling problems mentioned above. Although internal validity was tested several ways, the Chi squared test was deemed easiest and most appropriate. In certain cases, classes were collapsed to ensure valid use of the test. Levels of significance in comparing the control group with both the total of all VEPS enrollees and the subtotal from the four VEPS cities with controls are provided in the tables below.

Demographic comparability between the groups is shown in Table 1. While little difference can be noted in terms of enrollee sex, significant variation can be found in age, school year, and ethnicity. The control group is somewhat younger than the VEPS group, and understandably, this age differential is also reflected in school year (more underclassmen). The differential is due to two factors: the emphasis on sixteen year olds in selecting the control group and the rejection of this criterion for selection in certain VEPS programs. The combination of these factors, plus the fact that VEPS was geared to a relatively small universe, results in highly significant distributional differences between the VEPS group and the control group in terms of age. Analysis routines consequently took cognizance of this differential, as explained below and in Part IV of this report.

Table 1

SELECTED DEMOGRAPHIC CHARACTERISTICS OF VEPS-I COMPLETERS AND CONTROL GROUP

Enrollee Characteristic		All VEPS-I Completers	Four City VEPS	Control Group
SEX	(N)	(272)	(155)	(151)
Male		51.8%	56.8%	53.0%
Female		48.2	43.2	47.0
		$p > .80$	$p > .50$	
AGE	(N)	(257)	(152)	(151)
15 or younger		12.1%	12.5%	19.2%
16 years		50.2	57.9	74.8
17 or older		37.8	29.7	6.0
		$p < .001$	$p < .001$	
ETHNIC BACKGROUND	(N)	(272)	(155)	(151)
Black		52.9%	70.3%	69.5%
White		28.3	10.3	21.9
Spanish, Other		18.8	19.4	8.6
		$p < .01$	$p < .01$	
SCHOOL YEAR*	(N)	(269)	(155)	(151)
Freshman		1.1%	1.9%	6.0%
Sophomore		4.1	5.8	10.6
Junior		68.4	85.2	71.5
Senior		26.4	7.1	11.9
		$p < .001$	$p < .05$	

*In performing X^2 significance tests, freshman and sophomore were collapsed into a single category.

The disproprotionate distribution along the ethnicity dimension is also a function of limited universe size, but more can be explained in terms of the geographic concentrations of youth with Spanish surnames. Due to these area concentrations (especially San Bernardino) a direct correspondence between the groups was impossible. Since no meaningful ethnic related differences are suggested, this factor is not important to the assessment of program outcomes. Thus, while important distributional variation can be noted, those differences arise from uncontrolled factors (program guidelines, decisions of VEPS staff, and a limited universe) rather than procedural aspects of control group selection.

Greater comparability, at least given the low statistical significance of the frequency distributions, exists between the experimental and control group with regard to family characteristics. See Table 2. Given conventional interpretation of the Chi squared statistic, none of the variations approach statistical importance ($p < .05$), except for the public

Table 2

SELECTED FAMILY CHARACTERISTICS OF VEPS-I
COMPLETERS AND CONTROL GROUP

Family Characteristic		All VEPS-I Completers	Four City VEPS	Control Group
HEAD OF HOUSEHOLD	(N)	(270)	(155)	(151)
Father		35.9%	32.3%	44.0%
Mother		56.3	61.3	49.3
Other		7.8	6.4	6.7
		$p < .30$	$p < .20$	
EMPLOYMENT OF HEAD	(N)	(262)	(155)	(150)
Over 35 hours		30.5%	18.4%	30.2%
Under 35 hours		16.4	15.8	11.4
Unemployed		53.1	65.8	58.4
		$p < .50$	$p < .10$	
CONTRIBUTES TO FAMILY SUPPORT	(N)	(221)	(132)	(134)
Yes		28.1%	12.1%	19.4%
No		71.9	87.9	80.6
		$p < .10$	$p < .30$	
PUBLIC ASSISTANCE	(N)	(267)	(153)	(151)
Yes		50.2%	64.1%	51.0%
No		49.8	35.9	49.0
		$p < .99$	$p < .05$	

assistance variable comparing the control group with the same four VEPS cities. Such bias as does exist casts the control group in a favored light. Generally, the control group evidences fewer characteristics of social pathology--female headed households, unemployed or underemployed head of household, and public assistance--than do the VEPS enrollees. It is not unreasonable to argue that youth experiencing fewer of the debilitating effects occasioned by social pathological factors would experience less difficulty in attaining satisfactory academic performance and moving into the full-time labor force. Thus, although small levels of bias do exist between the control group and the VEPS group, that bias constitutes a more rigorous test of the VEPS program--if VEPS can be shown to have an impact upon enrollees.

The VEPS experimental group and the control group are also comparable in terms of their prior work experience. As can be seen in Table 3, substantially equal proportions of youth had held a job for which they received wages and had worked for thirty days or more. For most of the youth, this work experience was obtained through the regular NYC program.

Finally, since academic performance constitutes one of the criteria by which the impact of the VEPS program is to be assessed, some measures

Table 3

SELECTED EMPLOYMENT HISTORY CHARACTERISTICS OF
VEPS-I COMPLETERS AND CONTROL GROUP

Employment History		All VEPS-I Completers	Four City VEPS	Control Group
EVER WORKED	(N)	(253)	(136)	(151)
Yes		61.7%	65.4%	62.7%
No		38.3	34.6	37.3
		$p < .80$	$p < .50$	
WORKED 30 DAYS	(N)	(248)	(135)	(151)
Yes		53.6%	58.5%	57.8%
No		7.3	6.7	4.4
Never Worked		39.1	34.8	37.8
		$p < .50$	$p < .20$	

of comparability must be determined for beginning (1970-71) grade point averages and attendance in school. For reasons cited below (chiefly the rational character of the data), t-tests were computed comparing both grade point average and attendance for both groups in the 1970-71 school year (the year preceding the VEPS experiment). See Table 4. No significant difference could be found in grade point averages. With attendance, the

Table 4

T SCORES AND SIGNIFICANCE LEVELS OF ACADEMIC INDICATOR
COMPARABILITY BETWEEN VEPS COMPLETERS AND CONTROL GROUP

	Six City VEPS/ Control	Four City VEPS/ Control
1970-71 Grade Point Average	-0.2233	-1.4993
1970-71 Attendance	2.8217**	3.5263*

*Significant at the .001 level
**Significant at the .01 level

distributions were found to be significant at the .001 level, biased in favor of the control group. In other words, the control group showed significantly greater attendance and the VEPS group greater absence in the year preceding the experiment. As with family characteristic data, the importance of this distribution is that it provides a more rigorous test of the VEPS program since to reduce the significance level would require substantial improvement among the VEPS enrollees.

D. Data Processing and Statistical Routines

The data for analysis were collected by CUP monitoring teams over the duration of the VEPS program, usually within two months of each terminal point within the time series. Academic indicator information was derived from interviews with VEPS directors and counselors as well as the youth themselves. These data were classified and coded by CUP staff; data consistency and clean-up were introduced at three points in the analysis process, thereby reducing possibility of coding error to a minimum. In some cases, data on individual cases are missing despite the efforts of CUP and VEPS staff. This pertains primarily to tracking the youth following graduation when contact with VEPS and the school tended to dissipate rapidly. Data were processed on the CDC 3300 hardware at the Yalem Computer Center of Saint Louis University using both canned and special programs.

To draw meaningful comparisons between samples of uneven size, appropriate weights must be given to each sample in order to control the relative influence of each standard deviation in terms of sample size. Such a procedure is particularly useful in a pre-test, post-test design. An appropriate statistical routine to handle the rational character of the various academic data sets as well as the disparate size of the two groups is the t-test. This routine is capable of handling sample size distortions and yields a test of significance. In order to justify the t-test in this situation, it is necessary to assume that (1) the populations sampled have normal distributions and (2) the population variances (standard deviations) have the same value. Although these formal requirements are frequently insisted upon, slight violations of the requirements have relatively small effect upon conclusions. A normal distribution is apparently the less important of the two. Therefore, to test whether both groups have relatively the same variances, the F-test was employed. Where F ratios proved variance to differ excessively, the t-test was then ignored. As will be noted in Part IV of this report, rejection of t values was forced only in comparisons within individual cities. Although a significance level of .10 would be accepted for the one tail alternative by most analysts, we utilize the more rigorous .05 level to compensate for shortcomings in the data.

While the rational data (academic indicators) are susceptible to the t-test, the nominal data on program outcome precludes the use of this routine. Outcomes are measured in terms of graduation rates and ultimate employability on a full-time basis. To test the significance of these outcomes, we relied on the Chi square statistic. As above, we accepted findings as significant only at the .05 level.

The results of the statistical analysis and interpretation to assess the long and short term influence of VEPS can be found in Part IV.

PART III

ASSESSMENT OF LONGITUDINAL IMPACT ON VEPS-I COMPLETERS

The VEPS-I program enrolled 431 youth in eight cities--Columbus, Ohio (49); Flint, Michigan (62); Fort Worth, Texas (48); Haverhill (20) and Lawrence (33), Massachusetts; Pittsburgh, Pennsylvania (60); Salt Lake City, Utah (99); and San Bernardino, California (60). Although Norfolk, Virginia, also conducted a VEPS-I program, no systematic data were available on enrollees in that city. No follow-up data are available for Lawrence and Haverhill. Almost two-thirds (63.1%, n = 272) completed the year long program. Of the completers, sixty-nine (25.4%) were seniors who graduated. The 159 terminations (36.9%) included forty-two high school dropouts (9.7% of the original group of enrollees and 26.4% of the terminations). The descriptive analysis which follows concentrates on the VEPS-I completers for the summer following the experimental year, their senior year in high school, and the three-month period following graduation of their class. Additional information on the experimental year outcomes may be found in Center for Urban Programs, Vocational Exploration in the Private Sector: Final Report and Assessment, 1971-72. For a comparison of the VEPS-I and VEPS-II programmatic outcomes, see Center for Urban Programs, Vocational Exploration in the Private Sector: Final Report and Assessment, 1972-73; selected comparative demographic and outcome data for the two program years are reported in the Appendix.

Four separate data sets are utilized in this section--academic performance (grade point average and attendance) in the senior year, final high school academic disposition, employment patterns following the VEPS-I experiment, and employment patterns following commencement of the high school class. Statistical assessment of the significance of these longitudinal patterns in comparison to a control group of NYC enrollees is provided in Part IV of this report.

A. Academic Performance of the VEPS-I Completers

Among the several program objectives was a desire to enhance enrollee awareness of the need for, and value of, a high school education. Two indicators of program impact were available to assess the degree of program success--grade point performance (G.P.A.) and attendance. Table 5 provides a comparison of change in academic indicators for the VEPS-I experimental year and the senior year following. The data base for the VEPS-I year was the year preceding (1970-1971); the data base for the senior year is the VEPS-I year (1971-1972). Data for the senior year (1972-73) presumably demonstrate the staying power of the VEPS-I impact, that is the degree to which the VEPS experience continued to manifest itself in improving or stabilizing grade point performance and attendance in school during the senior year.

In terms of grade point average, the aggregate data reveal quite similar impacts. Although in terms of totals, slightly more youth declined

Table 5

Comparison of Change in Academic Indicators for the VEPS-I and Senior Years for VEPS-I Completers

Academic Indicator		VEPS-I Year	Senior Year
Grade Point Average Change	(N)	(254)	(148)
Up		61.8%	56.8%
Same		2.8	2.7
Down		35.4	40.5
		100.0%	100.0%
Summary Scale G.P.A. Change	(N)	(254)	(148)
+1.26 or better		9.1%	6.1%
+0.76 to +1.25		12.2	12.2
+0.26 to +0.75		26.8	28.4
-0.25 to +0.25		28.3	31.8
-0.26 to -0.75		13.4	15.5
-0.76 to -1.25		7.5	3.4
-1.26 or worse		2.8	2.7
		100.1%	100.1%
Attendance Change	(N)	(245)	(129)
Up		49.8%	48.8%
Same		4.9	3.2
Down		45.3	48.0
		100.0%	100.0%
Summary Scale Attendance Change	(N)	(245)	(129)
+10 days or more		26.5%	24.8%
+4 to +9 days		13.5	17.8
-3 to +3 days		22.0	21.7
-4 to -9 days		13.1	14.0
-10 days or more		24.9	21.7
		100.0%	100.0%

in grade point average during the senior year, when these data are scaled it can be seen that a substantial portion of those declines were quite small in magnitude. While 48.1% of the youth improved by at least a quarter of a grade point in the VEPS year, 46.7% did so in the senior year. Looking at the opposite end of the scale, 23.6% of the youth declined by a quarter point of more during the VEPS year compared to only 21.5% during the senior year.

The same pattern holds true for the attendance data. While slightly more youth declined absolutely in attendance during the senior year (i.e., missed more school), the magnitude of that decline is quite small. In the VEPS year, 38.0% of the youth declined in attendance by four days or more, compared to 35.7% during the senior year.

These data would indicate a moderately strong long term impact due to the VEPS experience and supports the conclusion that VEPS has a beneficial impact upon the enrollees in terms of grade point average and school attendance. This conclusion can be tested further by examining change in academic and attendance performance over the two year period covering both VEPS and the following senior year. These data are provided in Table 6.

Table 6

Academic Indicator Trends: VEPS to Senior Year

Trend: VEPS to Senior Year	G.P.A. Trend	Attendance Trend
(N)	(148)	(126)
Improved VEPS; improved senior year	16.9%	17.5%
Improved VEPS; stable senior year	14.2	9.5
Improved VEPS; declined senior year	22.3	15.9
Stable VEPS; improved senior year	10.1	5.6
Stable VEPS; stable senior year	9.5	5.6
Stable VEPS; declined senior year	3.4	11.9
Declined VEPS; improved senior year	15.5	20.6
Declined VEPS; stable senior year	6.8	4.8
Declined VEPS; declined senior year	1.4	8.7
	100.1%	100.1%

In terms of grade point average, long term positive impact (improved at least one-quarter grade point) is apparent in 31.1% of the youth (improved VEPS and improved or stable senior years), and only 8.2% experienced long term negative impact (declined at least one-quarter point in VEPS and were stable or declined at least one-quarter point in the senior year). Short term positive impact can be seen in 22.3% of the cases (improved in VEPS but declined in senior year) compared to 15.5% short term negative impact (declined in VEPS but improved in senior year). Of those who improved academically in their senior year grade point average, two-thirds improved or were stable in the VEPS year; of those who demonstrated a stable senior year, over three quarters improved or were stable in the VEPS year. Finally,

of those who declined in their senior year, 94.8% improved or were stable in their VEPS year. These several splits of the data confirm that VEPS had long term favorable impact for nearly one-third of the enrollees and short term favorable impact for another one-quarter, compared to a combined long and short term negative impact on about one-sixth of the enrollees. On balance, the VEPS experiment must be termed successful in terms of improving academic performance.

Data for patterns in attendance are not as dramatic, although still clearly positive in outcomes. Long term benefits can be seen for 27.0% of the enrollees compared to long term negative impact for 8.7%; short term positive impact occurred in 15.9% of the cases compared to short term negative in 4.8%. Of those who improved in their senior year, over half (52.9%) had improved or were stable in the VEPS year. Three-fourths of those who were stable in their senior year attendance had improved or were stable in the VEPS year, while a similar three-fourths of those who declined in the senior year had improved or were stable in the VEPS year. These data reinforce the conclusion that the net effect of VEPS upon enrollee attendance in school is clearly positive.

As favorable as these trend data are in assessing the impact of VEPS upon enrollee school performance, the enrollees who experienced declines in their senior year may well mask an overall positive impact for VEPS, especially, those who declined in their senior but whose performance through and following VEPS was substantially better than their performance in the year preceding the program year. Thus, composite three year trend data are required to measure more precisely the actual impact of VEPS; these data are presented in Table 7.

Table 7

Composite Three Year Academic Indicator Trends

Composite Three Year Trend (1970-71 to 1972-73)	G.P.A. Trend	Attendance Trend
(N)	(148)	(126)
Steady improvement	35.1%	27.0%
Improved VEPS; stable senior	2.0	4.0
Improved VEPS; declined senior, but improved over base	17.6	12.7
Improved VEPS; declined senior; below base	13.5	12.7
Declined VEPS; improved senior; over base	15.5	13.5
Declined VEPS; improved senior; below base	6.8	9.5
Declined VEPS; stable senior	0.0	0.0
Steady decline	9.5	20.6
	100.0%	100.0%

Both short and long term positive impacts upon enrollees can be discerned for the three year period.* In terms of grade point performance, a total of 70.2% improved their senior grade point average over the base period, regardless of outcome during the VEPS year; this figure includes 35.1% who show steady improvement and another 2.0% who improved in VEPS and stabilized in the senior year. A total of 29.8% declined below the base figure with 9.5% showing a steady decline over the three year period and another 6.8% who improved over VEPS in the senior year but were still below the base figure.

In terms of attendance, once again the figures are favorable but somewhat less dramatic than grade point averages. A total of 57.2% improved attendance over the base period, including 27.0% who steadily improved and 4.0% who improved and then stabilized. On the opposite side, 42.8% showed a decline below base figures, including 20.6% who steadily declined and 9.5% who improved over VEPS in their senior year but still had more absences than during the base period.

Overall, then, the three year trend data are quite clear. The VEPS experiment had a beneficial impact on a substantial majority of the VEPS enrollees; while some negative impact can be observed, both the short and the long term impact is obviously positive, indicative of substantial and enduring impact upon the enrollees. The program objectives of enhancing enrollee appreciation of the need for and benefits of a high school education appear to have been met. Left unanswered (temporarily, see Part IV) is the question whether the improvement shown is common to youth similarly positioned or whether the outcomes can be attributed to VEPS.

B. Final Academic Disposition

A second major objective of the VEPS-I experiment was to encourage youth to remain in school and to graduate. The indicator of programmatic success or failure in this regard is relatively easy to operationalize, and the data in Table 8 clearly demonstrate that to a substantial extent this program objective was met.

Table 8

Final Academic Disposition for VEPS-I Completers as of June, 1973

Disposition	(N)	(Percent)
Graduated, 1972	69	27.9%
Graduated, 1973	134	54.3
Not graduated, could have	9	3.6
Not graduated, could not have	13	5.3
Dropout	22	8.9
Total	247	100.0%

*Previously, change had been measured in terms of + or - a quarter of a grade point; any change of less than a quarter point was considered stable. Data in Table 3 are presented to show any change whatsoever, regardless of magnitude.

Of the 247 VEPS completers for whom data could be obtained, 203 (82.2%) graduated from high school. Although VEPS guidelines called for the selection of rising juniors, several programs included a small number of rising seniors and sophomores among the enrollees; these are represented by the sixty-nine seniors who graduated in 1972 (close of VEPS-I) and thirteen youth (predominantly sophomores) who were incapable of graduating in 1973. A more accurate representation, then, would have a total of 134 youth out of 165 (81.2%) who were rising juniors at the time of enrollment in VEPS who continued in school and graduated on schedule. Nine youth (3.6%) who could have graduated failed to do so, while another twenty-two (8.9%) dropped out in their senior year. Males predominate among the dropouts; the reasons most frequently given were finding full-time employment and entering military service.

As with the grade point averages and attendance data, the final academic disposition of the VEPS-I completers provides another indicator of successful attainment of programmatic goals.

C. Employment Patterns Following the VEPS Experience

A major objective of the VEPS program was to provide NYC eligible youth with work experience and job training so as to permit them to obtain full-time private sector employment in the summer between the end of the VEPS experience and the start of their senior year and part-time through the senior year. The data in Table 9 provide frequency distributions by employment status for three time references: at the close of the VEPS experience, for the summer of 1972, and through the senior year of school.

Table 9

Employment Status of VEPS-I Completers at Selected Time References

Employment Status	Close of VEPS-I	Summer 1972	School Year (Senior) 1972-73
(N)	(258)	(177)**	(177)
At VEPS employer	37.2%	29.4%	23.7%
Other private sector	4.3	3.4	4.0
VEPS-II	22.9	40.7	33.3
NYC, other public sector	20.9	20.3	18.1
Employed private sector, later terminated	N/A	0.6	5.6
Unemployed in school	4.3	1.7	1.1
Dropout	N/A	2.8	12.4
Other	10.4*	1.1	1.7
Unknown	N/A	0.0	0.0
	100.0%	100.0%	99.9%

*Includes 6.2% in higher education and 2.3% military service.

**Lower N is due to exclusion of VEPS seniors who graduated at the end of the program year and absence of data from several cities.

The data are complicated by a series of events that marked the operations of the VEPS-I Program. Many programs began the projected year long program later than scheduled, and consequently, felt it desirable to re-enroll youth in VEPS-II for a second year of work experience and training; other programs failed to convey the goal of unsupported private sector employment for the youth after the first year to the employers. Consequently, when the employer was asked to retain the youth, many refused. A small group of employers, who had been made aware of the program goal, took advantage of it by later refusing employment. In both these cases, youth tended to be reassigned to VEPS or the regular NYC program during the summer and/or senior year. These events handicapped many programs and seriously limited effective assessment of the intermediate employment goals of the VEPS program. The impact of operational problems is clearly demonstrated in the data; 43.8% of the youth were re-enrolled in VEPS-II or placed in NYC at the close of the experimental year; in the summer this figure rose to 61.0% but fell slightly during the senior year to 51.4%. Such heavy concentrations of youth in the VEPS-II and NYC categories inhibits meaningful analysis and clouds interpretation of other data. However, a sizable number of youth did remain at the VEPS employer, gradually declining over the time references provided. A small percentage of youth found other private sector work, but for one reason or another terminated that employment. Extremely small percentages were unemployed at the various measurement points. Other private sector employment remained fairly stable over the time period; when these youths are combined with the youth retained by VEPS employers, a sizable proportion of youth were placed in the private sector with some prospects of longevity. One suspects, therefore, that the VEPS program partially attained the objective of private sector employment, but the data are imprecise due to the VEPS re-enrollments and NYC assignments.

D. Final Employment Disposition

The ultimate goal of the VEPS objective was to provide work experience and training for full-time employment upon graduation from high school and thus ease transition into the labor force. The ultimate test of efficacy rests in the extent to which any of several programmatic outcomes are consistent with the program objective, full-time employment and higher education being two of the more obvious favorable outcomes. The data in Table 10 demonstrate the effectivenss of VEPS in attaining the ultimate programmatic objective.

Table 10

Employment Status of VEPS Completers Following Graduation

Employment Status	N	%
At VEPS employer	59	28.0%
VEPS skill related employer	15	7.1
Unrelated private sector	32	15.2
Public sector employment	3	1.4
Higher or technical education	48	22.7
Military service	14	6.6
Married, housewife	13	6.2
Unemployed	22	10.4
Other (moved)	5	2.4
	211	100.0%

Private sector employment on a full-time basis accounts for slightly more than half (50.3%) of those enrolled that could be tracked. Although 10.4% of the youth were unemployed following graduation, this figure would appear to be substantially below the unemployment rates for teenagers generally and black teenagers particularly.

The data on employment status provide a reasonably clear picture of the impact of VEPS. Favorable outcomes (excluding the unemployed and the "other" categories) total 87.2% of the youth who completed the program. Public and private full-time employment accounts for 51.7% of the VEPS completers; a plurality (28.0%) of youth remained at the VEPS work station and an additional 7.1% found work at another employer utilizing skills and experience obtained at the VEPS employer. The data implications are clear: the VEPS program, based on these disposition outcomes, appears to be a significant and meaningful instrument for encouraging youth to remain in school, gain work experience, graduate from high school and find full-time employment.

PART IV

COMPARISON OF VEPS COMPLETER AND CONTROL GROUP OUTCOMES

To determine whether the generally favorable VEPS programmatic outcomes reported in the previous section were due to the program or to intervening variables (such as natural maturation or localized economic or educational situations), a control group of regular NYC enrollees was drawn in four of the eight cities operating a VEPS-I program; these cities were: Columbus, Ohio; Flint, Michigan; Pittsburgh, Pennsylvania; and San Bernardino, California. The control group selection process is detailed in Part II of this report. A total of 151 NYC youth was selected for the control group, compared to 155 VEPS-I completers in the same four cities. The analysis N may vary with individual variables and correlations due to missing data.

Comparison of outcomes focuses upon three data sets: (1) academic indicators as measured by change in grade point average and attendance patterns; (2) the graduation and dropout rates; and (3) employability of the youth upon graduation. Where rational data are involved (grade point average and attendance), T-scores were deemed an appropriate statistical measure of significance; with nominal data (graduation rates and employability), Chi square was utilized. For each of the data sets, some discussion of programmatic outcomes is provided for individual cities. By examining the nuances of the data within specific programs, the impact of those nuances upon aggregate impact measures can be appreciated. Also, discussion of outcomes in individual cities provides some orientation to the reader in interpreting statistical presentations. Finally, such analysis permits the reader to assess levels of success within individual cities, and, by using prior reports, to compare their own situation and work experience programs to those in the VEPS-I cities. Due to small cells, statistical significance tests were not computed for all cities for all variables.

A. Comparison of Academic Performance and Attendance Patterns

The t-scores provided in Table 11 compare grade point averages and attendance patterns for the two groups in each of the four cities by year and by change between years. Given the guidelines for selecting VEPS enrollees we would expect the t-scores for the 1970-71 school year to indicate a bias against the VEPS-I group, that is, the scores would indicate that the VEPS youth were lower in grade point performance (indicated by a negative sign) and higher in absences (indicated by a positive sign). The asterisks next to each t-score indicate levels of significance. We would further expect that, if the VEPS program occasioned change among the enrollees in the 1971-72 experimental year, the intensity of the t-score bias against the VEPS-I group would diminish or reverse to the point that there would be little difference between the two groups (non-significant t-scores). We would further expect that the "no significant difference" pattern would hold constant in 1972-73, indicative of a long range positive impact for the program.

In terms of change, our expectations are similar. Change from 1970-71 through 1971-72 should reveal significant improvement among the VEPS youth; the durability of that change (at a lower level of or no significance because much of the gap would have been eliminated between the two groups) should be revealed in change from 1971-72 through 1972-73. Finally we would expect to find significant differences in terms of change over the period 1970-71 through 1972-73. In light of previous analysis, we would expect change in grade point performance to be at a higher level of significance than change in attendance patterns.

As can be seen in Table 11, the expectations regarding the impact of VEPS are generally confirmed when enrollee data are compared to that of the control group. In terms of grade point average the differences between the VEPS-I and the control groups is in the expected direction (negative) for the 1970-71 base year with the exception of San Bernardino. Succinctly interpreted, the data reveal that the VEPS-I group in three of the four cities (significantly in Flint and Pittsburgh) was initially inferior to the control group in academic performance. In San Bernardino, the VEPS-I group was superior, but the difference is not statistically significant. We find also that the difference between the groups narrows considerably for the experimental year (1971-72) in the expected direction, again with the exception of San Bernardino. Finally, for the 1972-73 senior year the t-scores reveal that virtually no difference exists between the two groups. This is indicative that in each city, the impact of the program was to stabilize and equalize grade point performances between the VEPS and control groups. This is a positive outcome for the programs in Columbus, Flint and Pittsburgh (particularly the latter two) and a negative outcome for San Bernardino. It should be emphasized that the outcome in San Bernardino, while negative, is <u>not</u> statistically significant; the data merely reflect the influence of the creaming that occurred in the selection of enrollees for VEPS in that city. Pittsburgh definitely recruited youth with "hard core" academic problems, so that any change could only mean an improvement in that city.

Considering the change data, once again the expected distributions occur with the exception of San Bernardino. The impact of VEPS during the experimental year results in significant change in Flint and Pittsburgh; in Columbus the change is incremental and maximizes during the senior year. Overall, change from performance in 1970-71 to performance in 1972-73 is significant in Columbus (.05 level), Flint (.02 level) and Pittsburgh (.01 level). In San Bernardino change is in the negative direction, although the amount of change is not statistically significant.

In summary then, the conclusion that the VEPS program had a positive and significant impact upon grade point performance for the VEPS enrollees is confirmed in three cities--Columbus, Flint and Pittsburgh; in San Bernardino (which had been somewhat selective in its VEPS recruiting), change is in the negative direction and reflects the creaming process, but is not statistically significant.

The t-scores for the attendance data are also in the expected direction. For the 1970-71 base year, the VEPS-I completers were absent to a greater degree than the control group (indicated by the positive sign preceding the t-scores). Impact over the long term is significant only in

Table 11

Within City T-Score Comparisons of VEPS and Control Groups for Academic Indicators
By Year and By Change Over Time

Academic Indicator	Columbus	Flint	Pittsburgh	San Bernardino
Grade Point Average				
1970-71	-1.2389	-1.9150*	-3.7759****	3.6206
1971-72	0.0141	0.2745	1.7175*	2.5699
1972-73	0.2107	0.6009	-0.0438	0.7207
Change in G.P.A.				
1970-71/71-72	1.2480	2.0190**	6.1238****	-1.3100
1971-72/72-73	2.0764**	0.7040	-1.6157	-0.8609
1970-71/72-73	1.7472*	2.2050**	2.6435***	-2.6529
Attendance				
1970-71	0.1426	1.377	3.5418****	3.3898
1971-72	-1.6468	-0.2201	0.3896	3.8420
1972-73	.3666	2.3068	-0.5491	0.7603
Change in Attendance				
1970-71/71-72	-2.9886	-1.3465	-3.3173****	-0.9060
1971-72/72-73	0.1480	2.2664	-0.0082	-2.9386
1970-71/72-73	-1.4967	0.4693	-1.9054*	-2.2582

Symbols:

* = significant at the .05 level
** = significant at the .02 level
*** = significant at the .01 level
**** = significant at the .001 level

Pittsburgh, although the scores reveal improvement among VEPS enrollees in the remaining cities, but not at a statistically significant level. Unlike grade point performance, the impact of VEPS upon school attendance is not dramatic within individual cities; this conclusion, however, is consistent with previous observations that attendance and grade point performance do not appear to be related in a statistically significant manner, and on occasion have been found to be inversely related. As was found in the data on grade point performance, San Bernardino runs contrary to the trend in the other cities, although again the change is not statistically significant.

The highly visible impact of VEPS in Pittsburgh, assuming all other factors are constant, would influence the outcome of aggregate programmatic impact measures. The strong influence of Pittsburgh upon the aggregate data when combined with the slight opposite impact of San Bernardino tends to balance each other in the aggregate data sets. However, in the analysis of aggregate measures of group differences, three sets of t-scores are utilized (See Table 13). The first set compares six VEPS cities (the four mentioned above plus Fort Worth and Salt Lake City) against the control group; the second set compares the four VEPS cities against the four counterpart control groups; the third set drops the San Bernardino data for both VEPS and control groups due to the impact of the selective screening of VEPS applicants in that city. As will be noted, however, these manipulations do not materially change the outcomes, except in terms of levels of significance.

Table 12 compares frequency distributions for the academic indicators for both VEPS-I and the corresponding control groups during the 1971-72 experimental year and the following senior year (1972-73). The N declines in 1972-73 due to the number of graduating seniors (either mid year 1972-73 or at the end of the VEPS year) or drop-outs in both groups.

In terms of grade point performance during the VEPS-I year, 62.9% of the (four city) VEPS-I youth improved their grade point average compared to less than half (47.0%) of the control group. For the senior year, the distributions among those improving or declining are virtually the same for both groups. The interpretation emerges, therefore, that the VEPS program had a positive impact upon the VEPS-I youth during the experimental year and that this impact continued into the senior year in that virtually no difference can be seen in performance of the two groups. It must be remembered that, as the t-scores will indicate, the VEPS-I group entered the program with significantly inferior grade point averages.

In terms of a summary scale, 50.3% of the VEPS-I youth improved their G.P.A. at least a quarter of a quality point during the VEPS-I year compared to only 33.8% of the control group. In the senior year VEPS-I youth improved an additional quarter of a point in 48.7% of the cases compared to 41.8% for the control group. Thus, VEPS-I youth improved in G.P.A. not only in absolute numbers, but quantitatively as well, in a manner superior to the control group.

We have noted in final reports and assessments for individual program years the apparent lack of a relationship between attendance and grade point

Table 12

Comparison of Change in Academic Indicators for the VEPS-I and Senior Years for VEPS-I Completers and Control Group

Academic Indicator		VEPS-I Year* VEPS	VEPS-I Year* Control	Senior Year** VEPS	Senior Year** Control
Grade Point Average Change	(N)	(151)	(151)	(115)	(129)
Up		62.9%	47.0%	56.5%	58.1%
Same		2.0	1.3	1.7	0.8
Down		35.1	51.7	41.7	41.1
		100.0%	100.0%	99.9%	100.0%
Summary Scale G.P.A. Change	(N)	(151)	(151)	(115)	(129)
+1.26 or better		10.6%	4.0%	6.1%	9.3%
+0.76 to +1.25		10.6	7.9	13.9	11.6
+0.26 to +0.75		29.1	21.9	28.7	20.9
-0.25 to +0.25		25.8	31.8	27.8	31.0
-0.26 to -0.75		11.9	20.5	15.7	20.2
-0.76 to -1.25		9.9	9.3	4.3	5.4
-1.26 or worse		2.0	4.6	3.5	1.6
		99.9%	100.0%	100.0%	100.0%
Attendance Change	(N)	(149)	(146)	(111)	(126)
Up		57.0%	37.0%	50.5%	39.7%
Same		7.4	3.4	2.7	5.6
Down		35.6	59.6	46.8	54.8
		100.0%	100.0%	100.0%	100.1%
Summary Scale Attendance Change	(N)	(149)	(146)	(111)	(126)
+10 days or more		32.2%	12.3%	25.2%	14.3%
+4 to +9 days		14.8	13.0	18.9	11.1
-3 to +3 days		22.8	33.6	21.6	31.0
-4 to -9 days		10.1	17.1	12.6	15.9
-10 days or more		20.1	24.0	21.6	27.8
		100.0%	100.0%	99.9%	100.1%

*Compares 1970-71 with 1971-72.
**Compares 1971-72 with 1972-73.
Data are for four VEPS-I cities with control groups only.

performance, and that the program appeared to have had only a marginal impact on attendance. The data comparing VEPS-I with the control group for attendance indicate a somewhat more favorable outcome. During the program year well over half (57.0%) of the VEPS youth improved their attendance compared to only 37.0% of the control group. Moreover, this pattern continues during the senior year where, again, more than half (50.5%) of the VEPS-I youth improved in attendance while only 39.7% of the control group did so. Quantitatively expressed in terms of a summary scale, the difference is even more apparent. While 47.8% of the VEPS-I youth were improving by at least four or more days in attendance during the VEPS-I year, only 25.3% of the control group did so. In the senior year, the same pattern holds; 44.1% of the VEPS-I youth improved a minimum of four days compared to only 25.4% of the control group.

Table 13 reveals the longitudinal pattern for the VEPS-I and control groups for the G.P.A. and attendance variables. Over the two years following the 1970-71 base year, VEPS-I youth showed steady improvement in G.P.A. in 33.9% of the cases compared to 20.2% for the control group. And conversely, while 8.9% of the VEPS-I youth showed a steady decline over the period, 13.2% of the control group did likewise. Much the same pattern holds true in attendance. While only 13.6% of the control showed steady improvement in attendance, 34.7% of the VEPS-I enrollees steadily improved. Conversely, while 22.1% of the VEPS-I youth showed steady deterioration of attendance, 32.8% of the control group did so.

Thus, utilizing comparative frequency distributions, the VEPS-I program appears to have had a substantial impact upon the enrollees, far beyond what would ordinarily be the case (as indicated by the control group). Compared to the control group, the differences in performance are striking. The question remains whether this disparate performance among the two groups is statistically significant, or whether the apparent differences are really not that dramatic.

Table 14 provides T-score tests for the significance of the unit data underlying Tables 12 and 13. In terms of grade point performance in 1970-71, comparison of the VEPS-I cities with the control groups reveals an insignificant negative bias indicating a superior control group; in the comparison of the three VEPS cities (Columbus, Flint and Pittsburgh) and their control groups, the difference is significant at the .01 level. This relationship results largely from the influence of the Pittsburgh VEPS-I data. In the 1971-72 experimental year, the t-scores indicate a reversal of the positions; VEPS youth are no longer inferior to the control group and show a slight positive bias, although the difference is not statistically significant. These data indicate that the program was successful in improving grade point performance, and (importantly) the difference between the groups is not significant at that point in time. The long term impact of VEPS-I is shown in the t-scores for 1972-73. Once again, there is a slight positive bias toward the VEPS youth, although the difference is again not statistically significant.

The analysis of change in grade point performance is more indicative of the impact of VEPS. Change from the base year (1970-71) during the experimental year is significant at the .001 level regardless of the city combinations. The lingering influence of VEPS is further demonstrated by the fact that no significant difference in change in grade point performance

Table 13

Composite Three Year Academic Indicator Trends*

Composite Three Year Trend (1970-71 to 1972-73)	G.P.A. Trend		Attendance Trend	
	VEPS	Control	VEPS	Control
(N)	(115)	(129)	(95)	(125)
Steady improvement	33.9%	20.2%	34.7%	13.6%
Improved VEPS; stable senior	1.7	0.0	4.2	2.4
Improved VEPS; declined senior, but improved over base	17.4	17.8	14.7	5.6
Improved VEPS; declined senior; below base	14.8	10.1	0.0	16.0
Declined VEPS; improved senior; over base	16.5	22.5	12.6	16.0
Declined VEPS; improved senior; below base	7.0	15.5	11.6	10.4
Declined VEPS; stable senior	0.0	0.7	0.0	3.2
Steady decline	8.7	13.2	22.1	32.8
	100.0%	100.0%	99.9%	100.0%

*Four VEPS cities with control groups only.

Table 14

T-Score Comparisons of VEPS and Control Group Aggregates for Academic Indicators
By Year and By Change Over Time

Academic Indicator	Six VEPS/ Four Control[1]	Four VEPS/ Four Control[2]	Three VEPS/ Three Control[3]
Grade Point Average			
1970-71	-0.2233	-1.4993	-3.9987****
1971-72	3.3948****	1.8786*	0.4255
1972-73	1.4538	1.5758	0.6051
Change in G.P.A.			
1970-71/71-72	3.9996****	3.5416****	4.2836****
1971-72/72-73	-0.2516	0.0258	0.6216
1970-71/72-73	1.9422*	2.5560***	3.6575****
Attendance			
1970-71	2.8217***	3.5263****	3.2595****
1971-72	-0.1113	0.1770	-0.3065
1972-73	-0.4368	-0.9422	0.3187
Change in Attendance			
1970-71/71-72	-3.4792****	-3.8780****	-3.7712****
1971-72/72-73	-1.8738*	-1.2766	0.2600
1970-71/72-73	-3.6695****	-3.4244****	-1.3534*

[1]Data are for the four VEPS cities with control groups plus Fort Worth and Salt Lake City VEPS.
[2]Data are for the four VEPS cities with control groups only.
[3]Data exclude San Bernardino VEPS and control groups.

Symbols:
* = significant at the .05 level
** = significant at the .02 level
*** = significant at the .01 level
**** = significant at the .001 level

occurs over G.P.A. performance in 1971-72 compared to 1972-73. When overall change is measured from 1970-71 through 1972-73, the longitudinal impact of the program is apparent. Although the differences between the groups vary with grouping of cities examined, a comparison of the four VEPS cities with their corresponding control groups shows significance at the .01 level; when San Bernardino is removed (and, therefore, the influence of the Pittsburgh data enhanced), the level of significance rises to the .001 level. Regardless of groupings, then, the analysis of change in grade point performance indicates a significant positive and long term impact upon the VEPS enrollees.

We have on occasion suggested that VEPS had only marginal impact upon attendance patterns, and that the relationship between attendance and grade point performance was only weakly positive. Analysis of the t-scores comparing the VEPS-I and control groups is indicative of a much more substantial impact than we had previously maintained. In examining the base year data (1970-71), the difference between the groups is significant at the .01 or the .001 level depending upon which grouping is used; VEPS-I youth were thus significantly more prone to be absent from school than was the control group prior to the experimental year. In the 1971-72 experimental year, this difference disappears, so that both groups are comparable in school attendance. This pattern continues to hold true for the year following the VEPS-I program. In fact, there is a slight positive impact in that the VEPS-I youth were less prone to miss school than the control group, although the difference is not statistically significant.

The real impact of VEPS emerges in analyzing change in attendance patterns over time. Comparing the VEPS-I year to the base year, significant (.001 level) improvement among the VEPS-I youth can be observed. Change from the VEPS-I year through the senior year continues to show improvement, although not at a statistically significant level. In other words the impact of VEPS-I was to radically improve performance among the VEPS-I youth during the experimental year, the effect of which persisted through the senior year. Very little recidivism occurred. Comparing change over the period 1970-71 through 1972-73, the difference is statistically significant at the .001 level, except in the three city comparison. In summary, VEPS-I proved to have significant and long term beneficial impact upon the school attendance patterns of the VEPS-I youth.

In exploring this finding further, we attempted to account for the variation from previous observations. It is apparent now that VEPS had substantial impact upon youth who previously had missed a considerable number of days from school and only marginal impact on those youth whose attendance pattern was more normal. Thus, while maintaining the normality of attendance patterns among most of the youth, the program also resulted in substantially improved attendance among those youth who had been most truant. It is the dramatic improvement among these youth that accounts for the high level of significance in the analysis of change. It might be suggested that improved attendance is the consequence of one of the operating norms of VEPS-I programs--no school, then no work and no money.

B. Final Academic Disposition

Important as grade point performance and attendance may be as indicators to assess the impact of VEPS upon the attitudes and behavior of the enrollees, the ultimate test of programmatic impact rests in the extent to

Table 15

Final Academic Disposition for VEPS-I Completers and the Control Group as of June, 1973

Disposition	First Grouping[1]		Second Grouping[2]		Third Grouping[3]	
	VEPS	Control	VEPS	Control	VEPS	Control
Graduated, 1972	27.9%	--%*	8.6%	--%	12.4%	--%
Graduated, 1973	54.3	75.3	65.1	75.3	57.1	75.0
Not graduated, could have	3.6	6.7	3.9	6.7	4.8	7.5
Not graduated, could not have[4]	5.3	4.0	8.6	4.0	10.5	5.0
Dropout	8.9	14.0	13.8	14.0	15.2	12.5
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(N)	(247)	(150)	(152)	(150)	(105)	(120)

[1]Includes six VEPS cities and the four control groups.
[2]Includes the four VEPS cities with their corresponding control groups.
[3]Excludes the San Bernardino VEPS and control groups.
[4]Represents sophomores in the VEPS-I year.

*To be included in the control group, a youth had to be in school during the 1972-73 academic year.

which VEPS-I attained its two principal academic objectives: did the enrollees stay in school, and did they graduate? Since no methodology exists to run a double blind (test what would have been the case without VEPS) on the VEPS-I enrollees, an assessment can only be attempted by using a control group for comparison.

Given the fact that the VEPS program was intended to serve dropout prone youth, evidence of a positive programmatic impact must be based on the presumption that without VEPS more youth would have dropped out and fewer would have graduated. From this standpoint, if it can be shown that VEPS-I youth were less prone to drop out and more prone to graduate than the control group, the impact of the program would have exceeded expectations. More likely as an expected positive result would be the determination of no discernable or meaningful difference between the VEPS group and the control group.

Table 15 provides frequency distributions on final academic disposition as of June, 1973, for the VEPS-I and control groups; consistent with previous analysis, we have utilized various groupings for the VEPS-I cities in order to mitigate the influence of data nuances. The key comparison rests in the four VEPS-I cities versus their comparable control groups; in that comparison very little difference between the groups can be observed. It should be mentioned in passing, however, that a small number of the VEPS-I enrollees were seniors when they were recruited for the program; these youth were graduated in 1972 rather than the expected 1973 date if the guidelines had been rigorously followed. Nevertheless, the key interpretation is simply the lack of any observable difference between the two groups in terms of graduating or dropping out.

Although the marginal frequencies would indicate that no significant distributions exist, Chi square tests were run on data for individual cities as well as the various groupings of cities. Final academic disposition data were dichotomized into graduated and not graduated to overcome small cells and data nuances; youth who could not have graduated under any circumstances were excluded. Small cells hampered computation in the four cities for which control groups exist, rendering it impossible in two of them. In the other two, no significant difference could be found. Only in the case of the six VEPS-I cities and the four control groups could a significant Chi square statistic (at the .05 level) be found; comparing the four VEPS-I cities against the counterpart control groups and comparing the same data excluding that from San Bernardino yielded Chi square levels of significance of $<.70$ and $<.80$ respectively.

In short, then, in terms of final academic disposition, no meaningful difference can be found in comparing the graduation rate for VEPS-I group with the control group. This should be interpreted as a positive outcome for the VEPS-I program in that youth selected for the program were more likely to be "probable dropouts" than were youth in the control group.

C. Employability in the Full-Time Work Force

While the school oriented objectives of VEPS constitute one major emphasis of the program, the final objective lies in the area of youth employability. Briefly stated, the objective of VEPS was to take dropout prone youth, reorient them toward completion of a high school educa-

tion, and ease their transition into the full-time labor force. It was hoped that the work experience and counseling received during VEPS-I would provide the youth with marketable skills to enhance full-time employment possibilities and thereby interdict the flow of unskilled youth into the labor pool.

In Part III of this report we reported that 50.3% of the VEPS-I completers who graduated were employed full-time in the private sector, while another 1.4% held public sector employment. Overall favorable outcomes (excludes unemployed and "other" categories) totaled 87.2% of the youth. Only 10.4% of the VEPS-I completers were unemployed at the time of the survey. Although interpretation bred of an awareness of the problems of unemployment among high school graduates would dictate that the 10.4% unemployment rate is comparatively low, the question still remains whether these outcomes for VEPS-I youth are substantially different from those of other NYC youth.

To achieve comparability of employment data with the control group, the data were collapsed into three categories: employed, unemployed and other; the other category included military service, higher education, married, moved and untraceable. The frequency distributions for these categories are provided in the upper half of Table 16, organized under the various city groupings. The first grouping compares six VEPS cities with the four control groups; the second grouping compares the four VEPS cities with their comparable control groups; and the third compares three VEPS cities and their control groups, excluding the data from San Bernardino. The comparability among the distributions regardless of city groupings is apparent from the data. To test the significance of the distributions, Chi square tests were run for each grouping, and in each case the level of significance was greater than .001. In other words, the fact that more VEPS youth were employed and fewer unemployed is statistically significant and is indicative of a substantial programmatic impact.

To eliminate the influence of the "other" category in the distribution, the data were dichotomized by eliminating the "other" category from the analysis. The resulting distribution is found in the bottom half of Table 16. Once again, the marginal frequencies are quite comparable across the city groupings. A Chi square test was run on the distributions and again revealed a high level of statistical significance--at the .001 level for the first two groupings and the .01 level for the third grouping. No Chi square tests could be run on the data for individual cities because of small expected frequencies in individual cells. Thus the elimination of the "other" category did not materially influence the levels of statistical significance. Even assuming all untraceable VEPS-I and control group youth were employed does not change levels of significance.

Based on these employability data, therefore, the conclusion may be drawn that a significant difference exists between the VEPS-I and control groups in terms of employability upon graduation from high school, and this difference may be attributed to the impact of the VEPS-I program. This outcome may be hedged slightly by the fact that over half of the employed VEPS-I youth remained at their VEPS-I employer, indicating that the mere fact of placing a youth in a private sector work setting is conducive to maximizing employability. But this hedge on the programmatic impact

Table 16

Final Employment Disposition for VEPS-I Completers and the Control Group as of June, 1973*

Employment Disposition	First Grouping[1] VEPS	First Grouping[1] Control	Second Grouping[2] VEPS	Second Grouping[2] Control	Third Grouping[3] VEPS	Third Grouping[3] Control
Employed	52.9%	29.6%	52.6%	29.6%	59.3%	30.0%
Other	36.4	40.0	30.4	40.0	22.1	38.0
Unemployed	10.7	30.4	16.0	30.4	18.6	32.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(N)	(206)	(115)	(125)	(115)	(86)	(100)
p	<.001		<.001		<.001	
Employed	83.2%	49.3%	77.0%	49.3%	76.1%	48.4%
Unemployed	16.8	50.7	23.0	50.7	23.9	51.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(N)	(131)	(69)	(87)	(69)	(67)	(62)
p	<.001		<.001		<.01	

[1]Includes six VEPS cities and the four control groups.
[2]Includes the four VEPS cities with their corresponding control groups.
[3]Excludes the San Bernardino VEPS and control groups.

*To be included in the control group, a youth had to be in school during the 1972-73 academic year.

of VEPS-I must itself be modified in light of the fact that most NYC youth are effectively precluded from participation in regular work experience programs. The desirability of on-the-job training to ease the post-training placement problem is also confirmed by this outcome.

PART V

SUMMARY AND CONCLUSIONS

The preceding analysis of the longitudinal impact of the VEPS-I program on enrollees in the first experimental year (1971-72) encompassed two main concerns: specific outcomes for the youth enrolled in the VEPS-I program, and the significance of those outcomes compared to the experiences of a control group of NYC enrollees. The longitudinal character of the assessment used the 1970-71 school year as a baseline; the academic and attendance behavior of the VEPS-I completers was plotted over time through the 1971-72 experimental year and the following 1972-73 senior year of high school. These youth were tracked to determine whether, in fact, they graduated from high school, did not graduate on time, or dropped out of school. Where appropriate, academic outcome data was compared to similar data for the control group.

Longitudinal information was also collected pertaining to the employability of the VEPS-I youth subsequent to the program and upon graduation. Employment status for the VEPS-I completers was plotted for four points in time: at the close of the VEPS-I experimental year, during the summer following the experimental year and preceding the senior year, during the senior year of high school, and after graduation. Again where appropriate, data were collected for the control group and used for comparative purposes.

The general conclusion to be drawn from the analysis of the above data is that the VEPS program proved to be an effective, significant, and lasting experience for the youth who completed the program, resulted in significant improvement in academic performance and attendance in school, and contributed significantly to the ability of the VEPS-I youth to obtain full-time employment upon graduation from high school.

This assessment of the VEPS program is based on careful analysis of data representative of the primary objectives of the program. We may summarize these objectives as follows:

1. To improve academic performance and attendance in school by means of demonstrating to dropout prone youth the value of a sound high school education through work experience and intensive counseling;

2. To reduce the propensity of such youth to drop out and to encourage them to obtain a high school diploma;

3. To provide meaningful work experience to enhance the work skills and attitudes of the enrollees;

4. To provide part-time employment to the youth while in school; and

5. To enhance the ability of the youth to secure full-time employment upon graduation.

The analysis of the longitudinal and outcome data confirms that the VEPS program successfully attained each of the objectives, frequently at a level superior to what might otherwise be expected. We may summarize the analysis findings as follows.

The impact of VEPS-I upon grade point performance was both significant and widespread. Dramatic improvement over the 1970-71 base year was characteristic of the VEPS-I youth during the experimental year; the impact of this change persisted through the following (senior) year. Both frequency distributions and t-score tests confirm this observation at a statistically significant level. Overall improvement in grade point performance from 1970-71 through 1972-73 is also statistically significant. The net result is that the VEPS-I program was instrumental in improving the grade point averages of VEPS-I youth to the point that they assumed a superior position over the control group in contrast to their inferior position during the baseline year. The analysis of differences between the two groups for only the 1972-73 (senior) year reveals a positive bias toward the VEPS-I group, although no statistical significance can be attached to the distribution. Analysis of change in grade point average over the entire time spectrum does result in a high level of significance in favor of the VEPS-I group. This relationship holds true regardless of the combinations of cities analyzed.

Much the same findings occur in analysis of attendance data. In 1970-71, the baseline year, the control group was significantly superior to the VEPS-I completers in terms of attendance patterns. Through each of the following two years this significance was eliminated, and the data indicate a slightly superior position for the VEPS-I group. Analysis of change in attendance patterns also yields high statistical significance. Although previous observations had been made that the impact of VEPS-I upon attendance patterns had been slight but positive, the implications of the change data are that VEPS-I had a significantly positive impact upon VEPS-I youth attendance patterns.

Significant as these quantifiable indicators are, the ultimate test of the academic impact of the VEPS program rests with only one outcome--whether the youth graduated or dropped out of school. Virtually no difference exists between the control group and the VEPS-I group in terms of either graduation rates or dropping out. Therefore, given the fact that VEPS was targeted for youth who were probable dropouts as evidenced by lower pre-program indicators, the conclusion is forced that the VEPS program reduced the propensity for VEPS youth to drop out of school and materially contributed to their earning high school diplomas.

The employability data are no less striking than that on academic performance. VEPS was intended to provide part-time employment during the VEPS-I year, full-time summer employment in the summer intervening between the VEPS-I year and the senior year, part-time employment in the senior year, and full-time employment upon graduation from high school. Part III of the report contains data indicating that the program was successful in the first three of these four employment-time objectives; part of this success can, however, be attributed to a continuation of VEPS into a second year. No control group information was pertinent to these VEPS objectives. The ultimate objective for which comparative data can be generated is employability upon graduation, representative of a smooth transition from high school into the full-time labor force. Regardless of the combinations of cities analyzed, at least half of the VEPS youth were employed full-time

compared to approximately thirty percent of the control group. Unemployment among the control group was nearly double that of the VEPS group. Both Chi square tests on the distributions and simple examination of the marginal frequencies yield the same conclusion: VEPS youth were employed at a significantly higher rate than was the control group.

Along all dimensions of programmatic objectives, then, the data indicate a highly successful VEPS-I experiment. The data reveal significant improvement in grade point performance and in attendance patterns, no discernable difference with the control group in graduation/dropout patterns (although VEPS-I enrolled probable dropouts), and significantly greater ability on the part of VEPS-I youth to obtain full-time employment upon graduation. In January, 1972, approximately six months into the VEPS-I experimental year, the Center for Urban Programs prepared an assessment paper for the Department of Labor to facilitate a decision whether or not to continue the VEPS program into a second year. In that paper, seven preliminary observations were made; it was contended that the VEPS-I program resulted in:

1. Reduced the tendency among VEPS-I youth to drop out of school;
2. Significantly improved academic achievement among VEPS-I enrollees;
3. Significantly improved school attendance patterns;
4. Improved disciplinary status among the enrollees;
5. Realistic attitude development and growth in individual responsibility;
6. Private sector work experience not normally available to the VEPS-I participants; and
7. Enthusiastic support of VEPS program personnel.

Analysis of the outcome data confirm the validity of these early statements. To these may be added two more; VEPS-I resulted in

8. Higher than expected graduation rates and lower than expected dropout rates; and
9. Significantly higher employment rates among VEPS-I enrollees than within a comparable control group.

APPENDIX

Table A-1

COMPARISON OF VEPS PROGRAMMATIC OUTCOMES
FOR VEPS-I AND VEPS-II COMPLETERS

Programmatic Outcomes	Program Year VEPS-I	VEPS-II	Difference (I-II)
GENERAL OUTCOMES			
Completed	63.1%	53.9%	- 9.2%
Terminated	27.2	36.2	+ 9.0
Dropout	9.7	9.9	+ 0.2
Total	100.0%	100.0%	
ACADEMIC OUTCOMES			
Direction G.P.A. Change			
Improved	61.8%	62.0%	+ 0.2%
Unchanged	2.8	6.0	+ 3.2
Declined	35.4	32.0	- 3.4
Total	100.0%	100.0%	
Actual G.P.A. Change			
+1.26 or more	9.1%	8.9%	- 0.2%
+0.76 to +1.25	12.2	14.4	+ 2.2
+0.26 to +0.75	26.8	23.4	- 3.4
+0.25 to -0.25	28.3	29.4	+ 1.1
-0.26 to -0.75	13.4	13.5	+ 0.1
-0.76 to -1.25	7.5	7.8	+ 0.3
-1.26 or more	2.8	2.6	- 0.2
Total	100.1%	100.0%	
ATTENDANCE OUTCOMES			
Direction Att. Change			
Improved	49.8%	48.8%	- 1.0%
Unchanged	4.9	6.5	+ 1.6
Declined	45.3	44.7	- 0.6
Total	100.0%	100.0%	
Actual Att. Change			
+10 days or more	26.5%	18.8%	- 7.7%
+4 to +9	13.5	15.3	+ 1.8
+3 to -3	22.0	32.8	+10.8
-4 to -9	13.1	14.3	+ 1.2
-10 days or more	24.9	18.8	- 6.1
Total	100.0%	100.0%	
FINAL DISPOSITION			
At VEPS Employer	37.2%	69.0%	+31.8%
Other Private Sector	4.3	6.3	+ 2.0
Returned to NYC	43.8	5.5	-38.3
Higher Education	6.2	6.0	- 0.2
Not Working	4.3	8.4	+ 4.1
Military	2.3	2.4	+ 0.1
Other	1.9	2.4	+ 0.5
Total	100.0%	100.0%	